Has the NEET UG 2024 paper been leaked?

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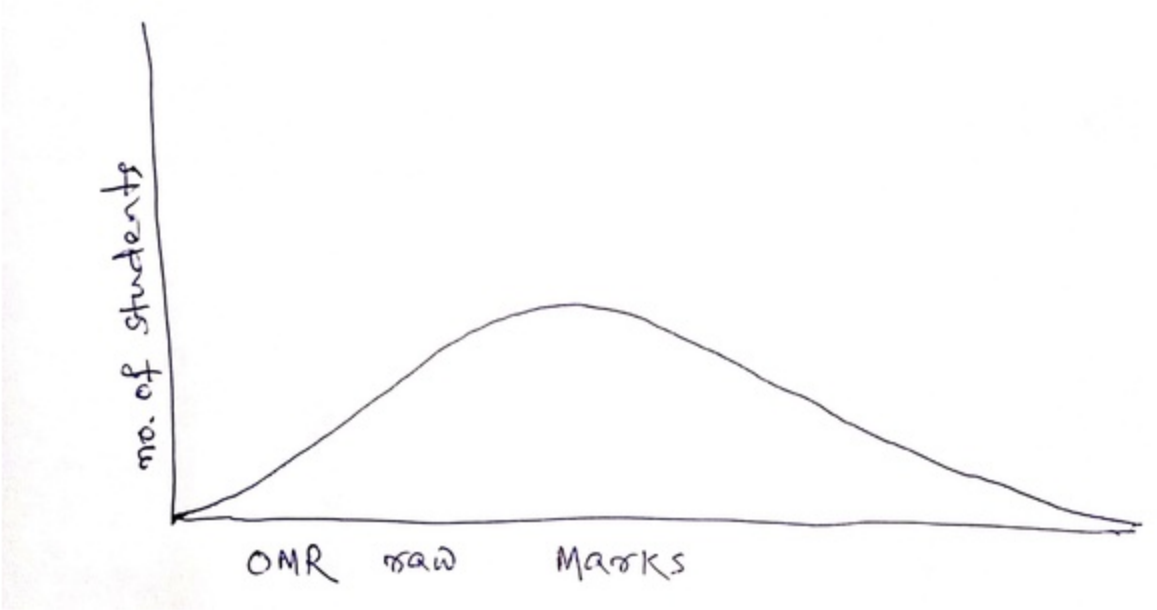
It is easy to know if NEET 2024 paper is leaked. This is the procedure to verify. The OMR marks are need to be considered. NTA may try to destroy OMR images.

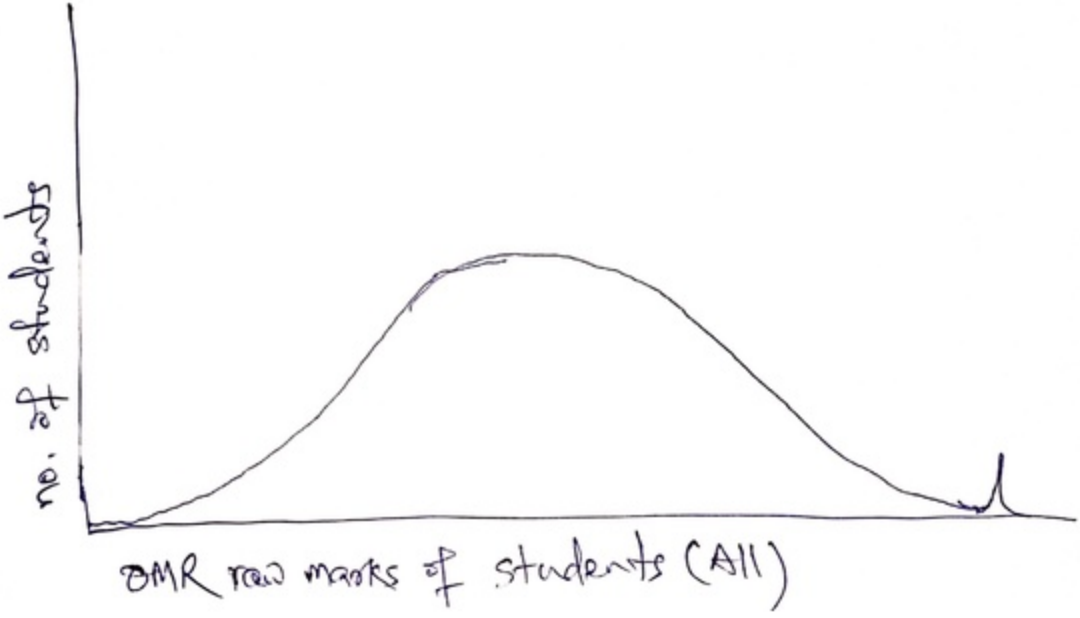
If court recruits a computer financial analyst with Computer Science BTech from old IITs, they will easily audit and verify the thing. Computer analysts with DBMS familiarity in Census or Election Office may or may not verify though. They should be give access to NTA Database.

Any exam mark distribution is just a bell shaped curve. That is population curve.



If some students purchase NEET 2024 paper and keys, their marks will soar. But since we are human, one to five errors may occur. Their distribution curve will be just a spike at the highest mark. BUT if it is just a line instead of spike, then the OMRs are filled by NTA experts and not the students.

Now, we will see the total mark distribution in this case where some students have NEET paper with keys or OMRs filled by NTA experts. It will look like a bell curve with a spike at the highest mark.



Next comes who have purchased NEET paper or asked NTA to fill their OMRs. That has been already dealt with in quora by me.

1 view

1 of 6 answers

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What are the chances of re-NEET 2024 with so much rank inflation?

Nobody digs, but they talk, write and cry about the outcomes. Probably these states too apart from bihar had access to the neet paper - andhra, gujrat, haryana, jharkhand, karnataka, kerala, madhyapradesh, maharashtra, odisha, punjab, rajasthan, tamilnadu, up, west bengal, delhi, assam.

There are five questions where all students would stumble upon and the NTA keys are wrong.

these 5 questions can directly prove the theory that neet paper were sold. because, the questions are wrong and/or no answer match. if nta makes answer keys at the time of question collection, then that proves the theory. Due to haste, the question might have transformed it's language. if all five questions are marked as per nta keys, that means those students had paper and keys. it also means rank 1 is lost in the crowd. answer keys and results are too fast. i.e., somebody ordered not to rectify answer keys.

2. answer to nuclear emission question = any well read student knows above arrow means adduct and with a negative sign means deduct. also they are aware of the signs for beta particle and electron. i.e., those who have confused would write emission and finally one electron ejection. those who are confident would know the answer is missing but to fetch mark they have to mark one answer. interestingly they will follow the leads of well read but confused students. those who are caustious but not well read, would just leave the question lest to get negative mark. BUT those who have purchased the paper and answer keys - would happily mark the wrong answer made and given to them by NTA.

3. answer to diode bridge balance question = no student or pgt teacher can justify how the nta answer is correct in a piece of paper. besides circuit simplification is not known to any. It is taught in elec engg course of B.Tech line. some may know the non-linear behaviour of a diode but not how to simplify it. i.e., in this question nobody would mark the omr except those who score below 200. BUT those who have purchased the paper and answer keys - would happily mark the wrong answer made and given to them by NTA.

4. answer to biodiversity question = Any well read student knows that is ex-situ conservation, it is not one of the to select question and they know a bonus would be bestowed upon. SO, they could not mark this question. BUT those who have purchased the paper and answer keys - would happily mark the wrong answer made and given to them by NTA eventhough they are well read.

5. answer to bt toxin question = any well read student knows one specific gene never codes for so many type of bt toxins. It is very well explained in the book. So, both the statements are false. This question can be used to bring forth the real future doctors of india. i.e., only those omrs marked for those two statements as wrong are capable of scoring very high marks. Not those who have purchased the paper and answer keys and happily marked the wrong answer made and given to them by NTA eventhough they are well read.

6. answer to DNA transfer to organism question = any well read student would stumble upon the integral part of chromosome option. But that too is correct. options with "may" are correct too. One can argue "shows" and "may show" are different, but it does not matter. There are no three or four correct choice options. i.e., NO well read student would mark the question on omr as it is not one of the to select question and they know a bonus would be bestowed upon and why bring a negative mark.

well read students on omr:

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would MARK: bt toxin question as both statements incorrect, nuclear emission as 286, 80.

would NOT mark or leave: DNA transfer to organism, biodiversity, diode bridge balance.

paper purchaser and less than 300 score(by luck) on omr:

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would MARK: all as per NTA keys

conclusion: The topper should be the one who has above omr markings and got 698 marks. Without above omr markings and very high marks are NTA deeds.

29. $^{290}_{82}X \xrightarrow{\alpha} Y \xrightarrow{e^+} Z \xrightarrow{\beta^-} P \xrightarrow{e^-} Q$

In the nuclear emission stated above, the mass number and atomic number of the product Q respectively, are

(1) 288, 82 (2) 286, 81

(3) 280, 81 (4) 286, 80

29. Answer: None of the above

Sol: Nuclear emission and nuclear fusion all comes under nuclear reaction.

Standard Convention: 1. Adducts are written with no or a "+" sign above the equation arrow and deducts are written with a "−" sign above the equation arrow. i.e., If one alpha particle $^4_2\alpha$ is emitted from $^{290}_{82}X$, it should be written as $^{290}_{82}X \xrightarrow{-\alpha} {}^{286}_{80}Y$. If one alpha particle is fused with $^{290}_{82}X$, it should be written as -

$$^{290}_{82}X \xrightarrow{\alpha} {}^{294}_{84}Y.$$

2. On both sides of the arrow, particles are part of an expression with different kinetic energies and different originating sources. If a β particle is emitted from nucleus, it would show up at a distance of more than one meter with lot of kinetic energy. But emission of electron from orbitals show up just at atoms site with some kinetic energy. (Geiger counter verifies.) The atomic atom becomes positively charged and nucleus unchanged. Above the reaction arrow, electron, β particle or positron are shown as $e^\ominus$, $\beta^\ominus$ and $\beta^\oplus$ respectively along with "+" or "−" sign to show if they add or depart. But on both sides of reaction arrow as part of an expression they are written as $^0_{-1}e$, $^0_{-1}e$ and $^0_{+1}e$ respectively to ease calculation, albeit one has to be careful about the fact that the source of electron are from orbitals and the source of β particles are from nuclei. As both are written as $^0_{-1}e$ and their energies are written separately if needed.

$\alpha \equiv {}^4_2\alpha$, $e^\oplus \equiv {}^0_{+1}e$, $\beta^\ominus \equiv {}^0_{-1}e$, $e^\ominus \equiv {}^0_{-1}e$

$e^\ominus$ will not decrease the nuclear charge, but charge the atom.

$$\therefore {}^{290}_{82}X \xrightarrow{\alpha} {}^{294}_{84}Y \xrightarrow{e^\oplus} {}^{294}_{85}Z \xrightarrow{\beta^\ominus} {}^{294}_{84}P \xrightarrow{e^\ominus} {}^{294}_{84}Q^\ominus$$

$\therefore$ Mass number = 294, atomic number = 84 and negatively charged.

Ans: None of the above

Confusing fusion with emission, one may yield

$$^{290}_{82}X \xrightarrow{\alpha} {}^{286}_{80}Y \xrightarrow{e^{\oplus}} {}^{286}_{79}Z \xrightarrow{\beta^{\ominus}} {}^{286}_{80}P \xrightarrow{e^{\ominus}} {}^{286}_{80}Q^{\oplus}$$

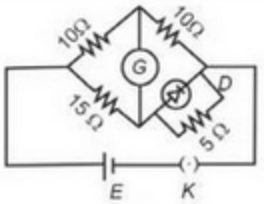
The last one is electron and it is only emitted from orbitals.

∴ Mass number = 286, atomic number = 80 and positively charged.

∴ Answer: (4)

44. Choose the correct circuit which can achieve the bridge balance.

(1)



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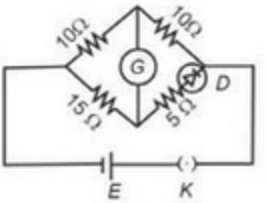

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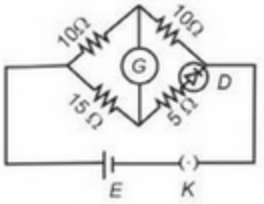
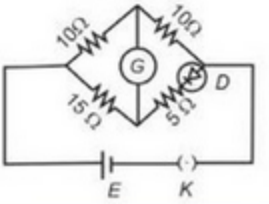


(4)



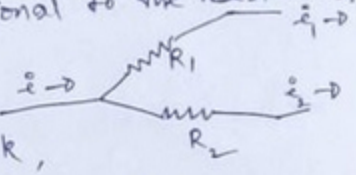
44. (From Set T2)

(Can be verified in the laboratory)

Ideal diode has zero resistance when forward biased and infinite resistance till breakdown voltage when reverse biased.

Current "i" divides as inversely proportional to the resistances.

If k is a constant, $i_1 = \frac{k}{R_1}$, $i_2 = \frac{k}{R_2}$



and $i = i_1 + i_2$. i.e., $i = k\left(\frac{1}{R_1} + \frac{1}{R_2}\right) = \frac{(R_1 + R_2)}{R_1 R_2} k$,

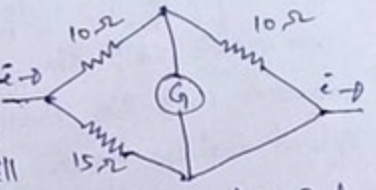
$\therefore k = \frac{i\, R_1 R_2}{(R_1 + R_2)}$. $i_1 = \frac{k}{R_1} = \frac{i\, R_1 R_2}{R_1 (R_1 + R_2)}$ or, $i_1 = i \frac{R_2}{(R_1 + R_2)}$.

Similarly, $i_2 = \frac{i\, R_1}{(R_1 + R_2)}$.

On left side of the four circuits let current i ~~divide~~ be divided into currents through ~~resistors 10Ω and 15Ω~~ into currents through resistors 10Ω and 15Ω.

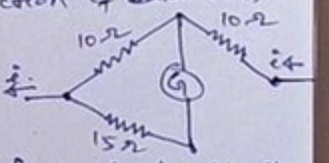
$i_{10} = \frac{i \times 15}{(10+15)} = \frac{3i}{5}$, $i_{15} = \frac{i \times 10}{(10+15)} = \frac{2i}{5}$.

$\frac{10}{(10+15)}$ $\frac{i}{5}$, $(10+15)$



Choice 1. Can not achieve bridge balance.

Ans: Diode is forward biased and parallel, i.e., zero resistance. Thus all $i_{15} = \frac{2i}{5}$ will flow through the diode and none toward the Galvanometer. But $i_{10} = \frac{3i}{5}$ will divide through 10Ω resistor and the Galvanometer. Thus so Galvanometer will deflect. (No deflection if balanced)

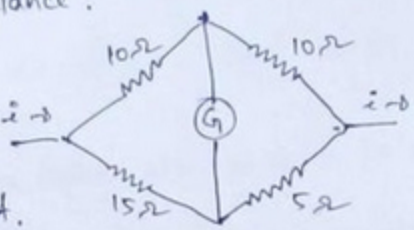


Choice 2. Can not achieve bridge balance.

Ans: Diode is reverse biased and in series, i.e., infinite resistance. Let the current flow from right. It will only order 10Ω resistor due to infinite resistance of diode. Then it will divide between the 10Ω resistor and the Galvanometer. Thus it will deflect. ∴ Can not achieve.

Choice 3: Can not achieve bridge balance.

Ans: Diode is forward biased, i.e., zero resistance and in series with 5Ω resistor. Thus it is as if diode is absent or 5Ω resistance only exist.



Now, $\frac{10\Omega}{15\Omega} \neq \frac{10\Omega}{5\Omega}$.

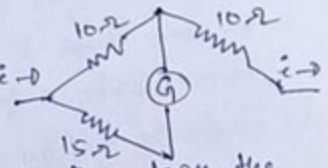
Also, if we divide the i_{10} and i_{15} currents and find out the components through Galvanometer with resistance "x" Ω.

$i_{10G} = \frac{3i}{5} \times \frac{10}{(10+x)} = \frac{6i}{(10+x)}$, $i_{15G} = \frac{2i}{5} \times \frac{5}{(5+x)} = \frac{2i}{(5+x)}$.

Solves for, $x = -\frac{5}{2}\Omega$. Negative resistance not possible.

∴ Can not achieve bridge balance.

Choice 4 : Can not achieve bridge balance.



Diode is reverse biased in series. ∴ infinite resistance. So $i_{15} = \frac{2i}{5}$ will flow through the Galvanometer upward. No part of i_{10} will flow down the Galvanometer. Thus only upward $\frac{2i}{5}$ current will flow through the Galvanometer causing it to deflect. ∴ Can not achieve bridge balance.

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balance.

Ans: None of the above

103. The type of conservation in which the threatened species are taken out from their natural habitat and placed in special setting where they can be protected and given special care is called

(1) Semi-conservative method

(2) Sustainable development

(3) *in-situ* conservation

(4) Biodiversity conservation

103. (From Set T2)

Reference: Biology 12, PP 225, 3rd paragraph.

Answer: Ex Situ Conservation. None of the above

now has 14 biosphere reserves, 90 national parks and 448 wildlife sanctuaries. India has also a history of religious and cultural traditions that emphasised protection of nature. In many cultures, tracts of forest were set aside, and all the trees and wildlife within were venerated and given total protection. Such **sacred groves** are found in Khasi and Jaintia Hills in Meghalaya, Aravalli Hills of Rajasthan, Western Ghat regions of Karnataka and Maharashtra and the Sarguja, Chanda and Bastar areas of Madhya Pradesh. In Meghalaya, the sacred groves are the last refuges for a large number of rare and threatened plants.

***Ex situ* Conservation**– In this approach, threatened animals and plants are taken out from their natural habitat and placed in special setting where they can be protected and given special care. Zoological parks, botanical gardens and wildlife safari parks serve this purpose. There are many animals that have become extinct in the wild but continue to be maintained in zoological parks. In recent years *ex situ* conservation has advanced beyond keeping threatened species in enclosures. Now gametes of threatened species can be preserved in viable and fertile condition for long periods using cryopreservation techniques, eggs can be fertilised *in vitro*, and plants can be propagated using tissue culture methods. Seeds of different genetic strains of commercially important plants can be kept for long periods in seed banks.

Biodiversity knows no political boundaries and its conservation is therefore a collective responsibility of all nations. The historic Convention on Biological Diversity ('The Earth Summit') held in Rio de Janeiro in 1992, called upon all nations to take appropriate measures for conservation of biodiversity and sustainable utilisation of its benefits. In a follow-up, the World Summit on Sustainable Development held in 2002 in Johannesburg, South Africa, 190 countries pledged their commitment to achieve by 2010, a significant reduction in the current rate of biodiversity loss at global, regional and local levels.

SUMMARY

Since life originated on earth nearly 3.8 billion years ago, there had been enormous diversification of life forms on earth. Biodiversity refers to the sum total of diversity that exists at all levels of biological organisation. Of particular importance is the diversity at genetic, species and ecosystem levels and conservation efforts are aimed at protecting diversity at all these levels.

More than 1.5 million species have been recorded in the world, but there might still be nearly 6 million species on earth waiting to be

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132. Given below are two statements:

Statement I : Bt toxins are insect group specific and coded by a gene *cry* IAc.

Statement II : Bt toxin exists as inactive protoxin in *B. thuringiensis*. However, after ingestion by the insect the inactive protoxin gets converted into active form due to acidic pH of the insect gut.

In the light of the above statements, choose the correct answer from the options given below:

(1) Statement I is true but Statement II is false

(2) Statement I is false but Statement II is true

(3) Both Statement I and Statement II are true

(4) Both Statement I and Statement II are false

Bt Cotton: Some strains of *Bacillus thuringiensis* produce proteins that kill certain insects such as lepidopterans (tobacco budworm, armyworm), colcopterans (beetles) and dipterans (flies, mosquitoes). *B. thuringiensis* forms protein crystals during a particular phase of their growth. These crystals contain a toxic **insecticidal protein**. Why does this toxin not kill the *Bacillus*? Actually, the Bt toxin protein exist as inactive *protoxins* but once an insect ingest the inactive toxin, it is converted into an active form of toxin due to the alkaline pH of the gut which solubilise the crystals. The activated toxin binds to the surface of midgut epithelial cells and create pores that cause cell swelling and lysis and eventually cause death of the insect.

Specific Bt toxin genes were isolated from *Bacillus thuringiensis* and incorporated into the several crop plants such as cotton (Figure 10.1). The choice of genes depends upon the crop and the targeted pest, as most Bt toxins are insect-group specific. The toxin is coded by a gene *cryIAc* named **cry**. There are a number of them, for example, the proteins encoded by the genes *cryIAc* and *cryIIAb* control the cotton bollworms, that of *cryIAb* controls corn borer.

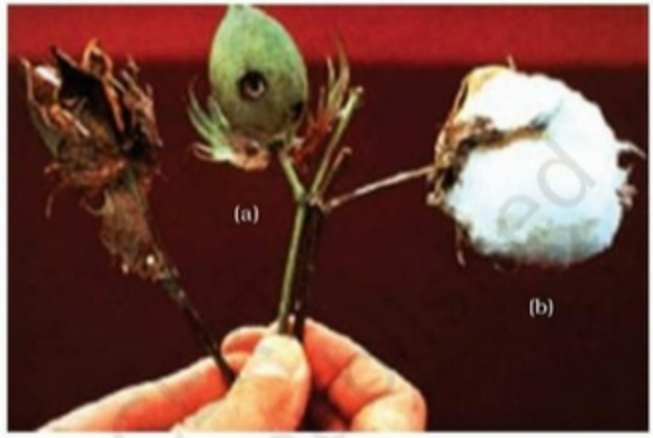

Figure 10.1 Cotton boll: (a) destroyed by bollworms; (b) a fully mature cotton boll

Pest Resistant Plants: Several nematodes parasitise a wide variety of plants and animals including human beings. A nematode *Meloidegyne incognitia* infects the roots of tobacco plants and causes a great reduction in yield. A novel strategy was adopted to prevent this infestation which was based on the process of **RNA interference** (RNAi). RNAi takes place

132. (From Set T2)
Reference: Biology 12, pp. 180, 1st paragraph.
"Statement I" is incorrect: As genes CryIAC, CryIIAB, CryIAB and a lot more code Bt toxins, which are insect-group specific.
51 group of genes code 6 class of Bt toxins. (Internet)
"Statement II" is incorrect: "basic pH" not "acidic pH".
Answer. (4) Both Statement I and Statement II are false.

133. What is the fate of a piece of DNA carrying only gene of interest which is transferred into an alien organism?

A. The piece of DNA would be able to multiply itself independently in the progeny cells of the organism.
B. It may get integrated into the genome of the recipient.
C. It may multiply and be inherited along with the host DNA.
D. The alien piece of DNA is not an integral part of chromosome.
E. It shows ability to replicate.

Choose the correct answer from the options given below:

(1) B and C only
(2) A and E only
(3) A and B only
(4) D and E only

Do you know the likely fate of a piece of DNA, which is somehow transferred into an alien organism? Most likely, this piece of DNA would not be able to multiply itself in the progeny cells of the organism. But, when it gets integrated into the genome of the recipient, it may multiply and be inherited along with the host DNA. This is because the alien piece of DNA has become part of a chromosome, which has the ability to replicate. In a chromosome there is a specific DNA sequence called the **origin of replication**, which is responsible for initiating replication. Therefore, for the multiplication of any alien piece of DNA in an organism it needs to be a part of a chromosome(s) which has a specific sequence known as 'origin of replication'. Thus, an alien DNA is linked with the origin of replication, so that, this alien piece of DNA can replicate and multiply itself in the host organism. This can also be called as **cloning** or making multiple identical copies of any template DNA.

Let us now focus on the first instance of the construction of an artificial recombinant DNA molecule. The construction of the first recombinant DNA emerged from the possibility of linking a gene encoding antibiotic resistance with a native **plasmid** (autonomously replicating circular extra-chromosomal DNA) of *Salmonella typhimurium*. Stanley Cohen and Herbert Boyer accomplished this in 1972 by isolating the antibiotic resistance gene by cutting out a piece of DNA from a plasmid which was responsible for conferring antibiotic resistance. The cutting of DNA at specific locations became possible with the discovery of the so-called

133. (From Set T2)

Reference: Biology 12, pp 164, 4th paragraph (New ~~boo~~ edition)

"A" is incorrect: As written in the book, "Most likely, this piece of DNA would not be able to multiply itself in the progeny cells of the organism."

"B" is correct: As written in the book.

"C" is correct: As written in the book.

"D" is correct: As stated in the question "after it transferred into an alien organism", it can infect only few cells. As without the indefinite article "a", "chromosome" represents all chromosomes of the organism.

∴ It is not an integral part of chromosome.

It is difficult to know if plasmids or a few chromosomes are infected in case of bacteria. Thus it may be an integral part of a chromosome or few chromosomes, depending on the number of infected cells, but it is definitely not an integral part of chromosome.

"E" is correct: Chromosome and plasmid both self replicate. The integrated piece of DNA may become part of either chromosome or plasmids. As in the question it is written, "after it is transferred." ∴ It shows ability to replicate.

Answer: None of the above or B, C, D and E only are correct.